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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 09/923,351  | 08/08/2001  | Philip Cunetto       | P19897              | 2860             |
| 7055  | 7590        | 11/16/2005           | EXAMINER            |                  |
| GREENBLUM & BERNSTEIN, P.L.C.<br>1950 ROLAND CLARKE PLACE<br>RESTON, VA 20191 |             |                      | ROBERTS, BRIAN S    |                  |
|   |             |                      | ART UNIT            | PAPER NUMBER     |
|   |             |                      | 2662                |                  |

DATE MAILED: 11/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

H.P

|                              |                        |                     |  |
|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 09/923,351             | CUNETTO ET AL.      |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | Brian Roberts          | 2662                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 06 September 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 September 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                                   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>06/22/2005</u>  | 6) <input type="checkbox"/> Other: _____                                    |

### **DETAILED ACTION**

- Applicant's Amendment filed 09/06/2005 is acknowledged.
- Claims 1-18 remain pending.

### ***Drawings***

1. The drawings were received on 09/06/2005. These drawings are acceptable.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-2, 4-11, and 13-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sreedharan et al. in view of Smyk.

- In reference to claims 1 and 7

Sreedharan et al teaches in Figure 1 a system comprising of:

- An ATM switch connected to a frame relay user where the frame relay user attempts to communicate with another frame relay user via an SVC connection. The signaling and switching functionality are resident in the ATM switch. (abstract, column 2 lines 25-50)

Art Unit: 2662

- A Network Management System (140) and a frame relay proxy controller connected to the ATM switch that is responsible for setting up each individual SVC connection, completing the data transfer via the SVC connection, and then breaking down the SVC connection. (column 5, lines 64-67)
- A signaling channel routed through the ATM switch (111-113) and terminating at the frame users (123-124), ATM users (121-122), and the NMS (140) where the ATM switch forwarded signaling to the NMS over the signaling channel (101).
- An ATM switch containing a controller for establishing a virtual circuit. (Figure 2)

Sreedharan et al. does not teach a proxy signal channel between the ATM switch and the controller used to set up an SVC connection in response to a request received over the signaling channel.

Smyk teaches a system where a plurality of proxy agents communicate with the ATM switch over the proxy channel in order to establish a SVC connection in response to a received request. (column 2, lines 16-22; abstract). Smyk further teaches a method where a plurality of proxy agents is connected to an ATM switch. Upon failure of a proxy agent, a proxy agent selector selects a new proxy agent. (abstract, Figure 2) (claim 7 – A second controller that becomes connected with the ATM switch when the controller becomes unavailable)

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the system as taught by Sreedharan et al. to include a proxy

Art Unit: 2662

agent (frame relay proxy controller) connected to the switching interface (210) (ATM switch) over a proxy channel as taught by Smyk in order for the proxy agent (frame relay controller) to remain separate from the switching interface (210) (ATM switch) and allow for the system to continue to function upon failure of the assigned proxy agent (frame relay proxy controller) since the plurality of proxy agents (frame relay controllers) can be used as backups for each other.

- In reference to claims 11 and 15

Sreedharan et al. teaches a system where an end user attempts to communicate with another end user via a SVC connection through an ATM switch network. The process inherently involves a setup request by the end user before a virtual circuit is established to transfer data across the network. Sreedharan et al. further teaches the NMS (140) establishing the PVC connection. The frame relay proxy controller (230) in the ATM switch is responsible for providing the SVC signaling and switching for the connection after the PVC is established. (column 5 lines 23-45) (claim 15 – controller receiving via a PVC)

Sreedharan et al. does not teach a controller sending a proxy signal to an ATM switch in order to set up an SVC connection across the ATM network.

Smyk teaches a system where a proxy agent receives a setup request from an ATM switch and then sends a proxy signal to the switch. (Figure 1-2, column 2 lines 10-45)

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the system as taught by Sreedharan et al. to include a proxy agent (frame relay proxy controller) connected to the switching interface (ATM switch) (210) and send a proxy signal via proxy channel as taught by Smyk in order for the proxy agent (frame relay proxy controller) to communicate with the switching interface (ATM switch) (210) and begin setup of a SVC within the ATM backbone network for data transfer between end users.

- In reference to claim 2

Sreedharan et al. teaches a system that covers substantially all limitations of these claims.

Sreedharan et al. teaches the establishment of PVC connections through the ATM backbone network (101). (column 4, lines 51-67) (claim 2 – signaling channel further comprises a PVC)

- In reference to claim 8

Sreedharan et al. teaches a system that covers substantially all limitations of these claims. Sreedharan et al. teaches a system where a plurality of ATM switches (111-113) is connected to the controllers within the ATM switches (111-113). (Figure 1-2)

Sreedharan et al. does not teach a system where a plurality of ATM switches is connected to a proxy control agent.

Smyk teaches a system where a plurality of ATM switches is connected to the proxy control agent. (Figure 2) (claim 8 – plurality of switches connected to the controller)

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the system as taught by Sreedharan et al. to include a proxy agent connected to the ATM switches as taught by Smyk in order for the proxy agent to communicate with ATM switches and begin setup of a SVC within the ATM backbone network for data transfer between end users.

- In reference to claims 9, 10, 17 and 18

Sreedharan et al. teaches a system that covers substantially all limitations of these claims. Sreedharan et al. further teaches an ATM access concentrator (130) capable of receiving a plurality of input data streams comprising of frame relay data and ATM cells and converting them into an ATM cell output stream. (column 4 lines 38-50, Figure 1) (claims 10, 18 –IWF gateway that converts non-system signaling into ATM signaling)

Sreedharan et al. does not teach a system that intercepts IP packets and retrieves IP signaling for processing by the controller to support Internet Protocol.

Sreedharan et al. teaches a system capable of handling packet-based data streams. (claims 9, 17 – intercepts IP packets and retrieve IP signaling for processing by the controller to support Internet Protocol)

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the system as taught by Sreedharan et al. to include the access concentrator to intercept IP packets and support Internet Protocol as well as frame relay data and ATM cells since those are all packet-based technologies and are used in LANs and WANs to provide the processing bandwidth and speed necessary to communicate real time voice, data, and graphics between end users

- In reference to claims 4-6 and 16

Sreedharan et al. teaches a system that covers substantially all limitations of these claims.

Sreedharan et al. does not teach an end system comprising an ATM SVC UNI signaling device or the proxy signals being SVC connection protocol compliant.

Smyk teaches a system where a SVC is established between two end users and where the ATM switch proxy agents are connected to the ATM switches. (column 1 lines 34-67; Figure 1) (claim 4 – end system further comprises an ATM SVC signaling device) The signaling involves the ATM Forum's UNI proxy signaling standard. (column 1, lines 36-67) (claim 5 – signaling comprises UNI signaling) (claims 6, 16 – proxy signal further comprises SVC connection protocol compliant signaling)

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the system as taught by Sreedharan et al. to include the end users using UNI signaling because UNI is a signaling standard common in the art and used in establishing a SVC connection in a system involving an ATM network.



- In reference to claim 13

Sreedharan et al. teaches a system that covers substantially all limitations of these claims. Sreedharan et al further a method of sending signals between ATM switches, controllers, and end users to establish a connection. (Figure 1-2)

Sreedharan et al. does not teach a second proxy signal from a second ATM switch to a second controller and a second controller sending a second connection setup signal to a second end system through the second switch.

Smyk teaches a system where a second proxy agent receives a proxy signal from a second ATM switch and then sends a proxy signal to the second switch to set-up the SVC. (Figure 1-2; column 2 lines 10-45)

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the system as taught by Sreedharan et al. to include a second proxy agent connected to a second ATM switch and send a second proxy signal via proxy channel as taught by Smyk in order for the second proxy agent to communicate with the second ATM switch and begin setup of a SVC within the ATM backbone network for data transfer between end users.

- In reference to claim 14

Sreedharan et al. teaches a system that covers substantially all limitations of these claims. Sreedharan et al. further a method of sending signals between ATM switches, controllers, and end users to establish a connection. (Figure 1-2)

Sreedharan does not teach explicitly teach a method of receiving by the second controller a first connection connect signal from the second end system that is routed through the second ATM switch; sending a third proxy signal from the second controller to the second ATM switch; sending a second connection connect signal from the second ATM switch to the first ATM switch; sending a fourth proxy signal from the first ATM switch to the first controller; and sending a third connection connect signal from the first controller to the first end system, the third connection connect signal being routed through the first ATM switch.

Smyk teaches a system in figure 2 where a first proxy agent and a second proxy agent communicate to switch 1 and switch 2 over a proxy channel. (Figure 1-2, column 2 lines 10-45, column 3 lines 4-66, column 4 lines 1-10)

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the system of establishing a SVC between end users as taught by Sreedharan et al. to include the proxy signaling between proxy agents 1 and 2 and switches 1 and 2 as taught by Smyk in order for the second proxy agent to communicate with the second ATM switch and begin setup of a SVC within the ATM backbone network for data transfer between end users.

4. Claim 3 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sreedharan et al. in view of Smyk, as applied to claims 1 and 11 above, and further in view of Hemmady.

- In reference to claim 3 and 12

The combination of Sreedharan et al. and Smyk teach a system that covers all limitations of the parent claims.

Sreedharan et al. and Smyk do not teach the controller communicating with a policy database in response to an ATM SVC setup connection request and determining whether to grant the connection request.

Hemmady teaches a method where an ATM controller communicates with a database storing data on the quality of service and congestion level of the network when selecting a SVC from a received setup signal. (abstract, [0065]-[0069], Figure 6) (claims 3, 12 – controller queries policy database when a first connection setup signal is received to determine whether to grant a connection request)

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the system as taught by the combination of Sreedharan et al. and Smyk to include a database for storing quality of service and congestion level data as taught by Hemmady to be queried by the proxy agent in order for the proxy agent to determine whether to grant the connection request and in order to select the best route for the connection.

### ***Response to Arguments***

5. Applicant's arguments filed 9/06/2005 have been fully considered but they are not persuasive.

- In the Remarks on pg. 2 of the Amendment, the Applicant contends that Sreedharan et al. teaches an intermediate point that can not signal for SVCs while the invention of claims 1 and 11 require SVC signaling.
- The Examiner respectfully disagrees that Sreedharan does not teach SVC signaling. The switching nodes (111-113) with frame relay proxy controllers are intermediate points that are responsible for setting up each individual SVC connection, completing the data transfer via the SVC connection, and then breaking down the SVC connection (column 5 lines 64-67)
- In the Remarks on pg. 3 of the Amendment, the Applicant contends Smyk does not teach how an end system to proxy device to ATM switch connection would operate or discuss the end system connectivity in enough detail to anticipate the claimed invention.
- The Examiner has not relied on Smyk to disclose all limitations of the claims. Rather, the combination of Sreedharan and Smyk does teach the claimed invention. In Figure 1, Smyk teaches a plurality of proxy agents (110; 112; 114) that communicate with an ATM switch (116) over proxy channels to establish a SVC connection. In case of failure, a proxy selector (224) identifies an alternative proxy agent should one or more of the other proxy agents fail. The fail over concept can be applied to Sreedharan. In Figure 1 and 2, Sreedharan teaches a frame relay proxy controller (230) (Proxy Agent) connected to the switching interface (ATM switch) (210) to establish a SVC connection. It would have been obvious to a person of ordinary skill in the art

at the time of the invention to modify the system of Sreedharan to include a frame relay proxy selector (proxy selector) and a plurality of frame relay proxy controllers (Proxy Agents) that communicate with the switching interface (210) (ATM switch) over proxy channels to instruct the switching interface (210) (ATM switch) to set up an SVC connection. In case of a failure to a frame relay proxy controller (230) (Proxy Agent), the frame relay proxy selector (proxy selector) would identify an alternative frame relay proxy controller (230) to establish a SVC connection via the switching interface (210) (ATM switch).

### ***Conclusion***

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

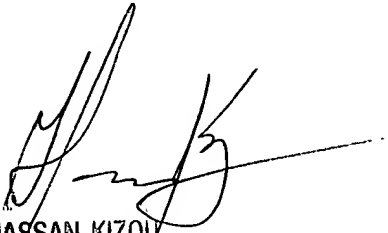
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Roberts whose telephone number is (571) 272-3095. The examiner can normally be reached on M-F 8:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (571) 272-3088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BSR  
11/01/2005



HASSAN KIZOU  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600